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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,175	06/30/2005	Masanori Shojiya	14434.85USWO	4887
52835 7590 06/19/2009 HAMRE, SCHUMANN, MUELLER & LARSON, P.C. P.O. BOX 2902 MINNEAPOLIS, MN 55402-0902				
EXAMINER HOBAN, MATTHEW E				
ART UNIT		PAPER NUMBER		
1793				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/541,175

Applicant(s)

SHOJIYA ET AL.

Examiner

Matthew E. Hoban

Art Unit

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI/02)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/2/09 and 4/2/09 has been entered.

Claim Objections

1. Claim 13 objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 13 currently has a scope greater than Claim 8, upon which it depends.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-7, and 9-12 rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto in 6332338.

Regarding Claim 1: Hashimoto teaches a glass composition preferably containing in mol% from 5-15% TiO₂, 4-20% CaO, 5-20% MgO + CaO, 5-22% of Na₂O + Li₂O, 0-8% Al₂O₃, and 40-50% SiO₂ (See Column 6, Lines 55-60). All of CaO, MgO, Na₂O and Li₂O are regarded as network modifying oxides. The content of these network modifying agents as taught by Hashimoto is from 10-

44%. In Hashimoto's teachings, Silica is the network forming oxide and is preferably present from 40-50%. Yttria is not included in this base composition. As can be discerned, Hashimoto's range of compositions represents an overlapping range of compositions with the claimed composition. It would have been obvious for one of ordinary skill in the art to chose from the portion of such overlapping ranges and necessarily arrive at the claimed composition. "In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); In re Woodruff, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). See MPEP 2144.05.

The recitation that the glass is to be used "for laser processing that is processed through laser beam irradiation" is deemed an intended use for the glass and does therefore not limit the composition of the glass. Thus this is not given patentable weight; however, at Column 32, Lines 50-60, Hashimoto notes that his glasses can be textured with a laser to prevent sticking to the substrate.

Regarding Claim 2: In Hashimoto's composition, 5-15% TiO_2 and 0-8% Al_2O_3 are deemed useful. Thus, $\text{TiO}_2 + \text{Al}_2\text{O}_3$ is in the range from 5-23% (See Column 6, Lines 55-60).

Regarding Claims 3-7: The properties claimed in claims 3-7 stem directly from the composition as is directly noted in many claims (i.e. f_m and F_m are based directly on only the properties of the glass constituents). Properties such as F_m , f_m , α , N_{BO} , the number of Si-O-Ti bonds and $2M_{Ti}$ necessarily follow from the composition. These properties therefore would necessarily be the same as that which is claimed when one of ordinary skill in the art chose from the overlapping ranges denoted by Hashimoto.

Regarding Claim 9-12: The glass of Hashimoto consists essentially of CaO, MgO, Na₂O, Li₂O, SiO₂, Al₂O₃, and TiO₂ (See Column 6, Lines 55-60). Hashimoto notes that an oxide of Zn, ZnO, can partially replace TiO₂ (See Column 8, Lines 50-60).

5. Claims 8 and 13-14 rejected under 35 U.S.C. 103(a) as being unpatentable over Zou in 6294490.

Regarding Claim 8 and 13: Zou teaches a glass composition under one aspect of his invention that has a composition including in mol%, from 5-15% TiO₂, 10-40% MgO, 5-25% Al₂O₃, and 35-65% SiO₂ (See Column 5, Lines 10-25). Yttria is not included in this base composition. As can be discerned, Zou's range of compositions represents an overlapping range of compositions with the claimed

composition. It would have been obvious for one of ordinary skill in the art to chose from the portion of such overlapping ranges and necessarily arrive at the claimed composition. . "In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); In re Woodruff, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). See MPEP 2144.05.

Regarding Claim 14: Zou notes that in the second embodiment of his invention As_2O_3 or Sb_2O_3 can be included as an antibubbling agent.

Response to Arguments

6. Applicant's arguments with respect to claim 1 and dependant claims have been considered but are moot in view of the new ground(s) of rejection. The new reference 6332338 has been used to reject these newly amended claims, as Zou did not teach the incorporation of sodium oxide in the claimed amount. However, applicant's arguments against Zou in relation to Claim 8 is unconvincing as Zou teaches a second embodiment which does not necessarily incorporate yttria. This embodiment still obviates the claimed range of compositions, as Zou teaches an overlapping range. It should be noted that this rejection is now a 103, rather than a 102, however.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew E. Hoban whose telephone number is (571) 270-3585. The examiner can normally be reached on Monday - Friday from 7:30 AM to 5 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J.A. LORENZO/
Supervisory Patent Examiner, Art Unit 1793

/Matthew E Hoban/
Examiner, Art Unit 1793

meh